



Test report No:
 NIE: 63185REM.091A1

Test report

FCC Rules and Regulations CFR 47, Part 15,
 Subpart B (10-1-19 Edition) & ICES-003 Issue 6
 (January 2016, Updated April 2019)

(*) Identification of item tested	Headunit with radio and Bluetooth
(*) Trademark	Panasonic
(*) Model and /or type reference	MIB3E_MQB37w_BTWIFI
Other identification of the product	Part number: 5E3.035.869 HW Version: X05 SW Version: X765 FCC ID: WUQ-MIB3VBTWIFI IC: 216R-MIB3VBTWIFI
(*) Features	Bluetooth, WLAN, FM, AM, DAB, USB.
Manufacturer	PANASONIC AUTOMOTIVE SYSTEMS EUROPE GMBH Robert Bosch Str. 27-29 – 63225 Langen - Germany
Test method requested, standard	FCC CFR 47, Part 15, Subpart B (10-1-19 Edition) & ICES-003 (Updated 04-2019)
Summary	IN COMPLIANCE
Approved by (name / position & signature)	Rafael López Martín EMC Consumer & RF Lab. Manager
Date of issue	2020-02-12
Report template No	FDT08_22 (*) "Data provided by the client"

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Competences and guarantees

DEKRA Testing and Certification is a testing laboratory accredited by the National Accreditation Body (ENAC - Entidad Nacional de Acreditación), to perform the tests indicated in the Certificate No. 51/LE 147.

DEKRA Testing and Certification is a FCC recognized accredited testing laboratory with appropriate scope of accreditation that include testing performed in this test report, FCC designation number ES0004.

In order to assure the traceability to other national and international laboratories, DEKRA Testing and Certification has a calibration and maintenance program for its measurement equipment.

DEKRA Testing and Certification guarantees the reliability of the data presented in this report, which is the result of the measurements and the tests performed to the item under test on the date and under the conditions stated on the report and, it is based on the knowledge and technical facilities available at DEKRA Testing and Certification at the time of performance of the test.

DEKRA Testing and Certification is liable to the client for the maintenance of the confidentiality of all information related to the item under test and the results of the test.

The results presented in this Test Report apply only to the particular item under test established in this document.

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General conditions

1. This report is only referred to the item that has undergone the test.
2. This report does not constitute or imply on its own an approval of the product by the Certification Bodies or competent Authorities.
3. This document is only valid if complete; no partial reproduction can be made without previous written permission of DEKRA Testing and Certification.
4. This test report cannot be used partially or in full for publicity and/or promotional purposes without previous written permission of DEKRA Testing and Certification and the Accreditation Bodies.

Uncertainty

Uncertainty (factor $k=2$) was calculated according to the DEKRA Testing and Certification internal document PODT000.

Data provided by the client

The following data has been provided by the client:

1. Information relating to the description of the sample ("Identification of the item tested", "Trademark", "Model and/or type reference tested").
2. The sample consists of an Automotive head unit to be installed in cars with the following features: Bluetooth, WLAN, FM, AM, DAB, USB.

DEKRA declines any responsibility with respect to the information provided by the client and that may affect the validity of results.

Usage of samples

Samples under test have been selected by: The client.

Sample S/01 is composed of the following elements:

Control Nº	Description	Model	Serial Nº	Date of reception
63185/001	Headunit with radio and bluetooth	MIB3E_MQB_BTWIFI	PM6-00129.11.19413F0369	2020-04-21

Auxiliary elements used with the sample S/01:

Control Nº	Description	Model	Serial Nº	Date of reception
51929B/117	USB Module	---	---	2018-12-10
51929B/450	Harness	---	---	2019-02-26

Test sample description

Ports..... :	Port name and description		Cable				
			Specified length [m]	Attached during test	Shielded		
	--		<input type="checkbox"/>	<input type="checkbox"/>			
Supplementary information to the ports..... :							
Rated power supply	Voltage and Frequency		Reference poles				
			L1	L2	L3	N	PE
	<input type="checkbox"/>	AC:	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
<input checked="" type="checkbox"/>		DC: 12Vdc					
Rated Power	--						
Clock frequencies..... :	--						
Other parameters	PN: 5E3.035.869 FCC ID: WUQ-MIB3VBTWIFI IC: 216R-MIB3VBTWIFI						
Software version	X765						
Hardware version	X05						
Dimensions in cm (W x H x D)	--						
Mounting position	<input type="checkbox"/>	Table top equipment					
	<input type="checkbox"/>	Wall/Ceiling mounted equipment					
	<input type="checkbox"/>	Floor standing equipment					
	<input type="checkbox"/>	Hand-held equipment					
	<input checked="" type="checkbox"/>	Other: Automotive head unit					
Modules/parts..... :	Module/parts of test item		Type	Manufacturer			
	--						
Accessories (not part of the test item)	Description		Type	Manufacturer			
	--						
Documents as provided by the applicant..... :	Description		File name	Issue date			
	--						

Identification of the client

PANASONIC AUTOMOTIVE SYSTEMS EUROPE GMBH
Robert Bosch Str. 27-29
63225 Langen, GERMANY

Testing period and place

Test Location	DEKRA Testing and Certification S.A.U.
Date (start)	2020-06-10
Date (finish)	2020-06-10

Document history

Report number	Date	Description
63185REM.091	2020-08-13	First release
63185REM.091	2020-12-02	The FM reception mode is considered in the definition of the operation modes under test.

Environmental conditions

In the control chamber, the following limits were not exceeded during the test:

Temperature	Min. = 15 °C Max. = 35 °C
Relative humidity	Min. = 30 % Max. = 75 %
Air pressure	Min. = 860 mbar Max. = 1060 mbar

In the semianechoic chamber, the following limits were not exceeded during the test.

Temperature	Min. = 15 °C Max. = 35 °C
Relative humidity	Min. = 30 % Max. = 75 %
Air pressure	Min. = 860 mbar Max. = 1060 mbar

In the chamber for conducted measurements, the following limits were not exceeded during the test:

Temperature	Min. = 15 °C Max. = 35 °C
Relative humidity	Min. = 30 % Max. = 60 %
Air pressure	Min. = 860 mbar Max. = 1060 mbar

Remarks and comments

The test have been performed by the technical personnel: Jaime Barranquero.

Testing verdicts

Not applicable :	N/A
Pass :	P
Fail :	F
Not measured :	N/M

List of equipment used during the test

Control Number	Description	Model	Manufacturer	Next Calibration
2942	EMI TEST RECEIVER 20Hz-40GHz	ESU40	ROHDE AND SCHWARZ	2021-09-17
4523	EMI TEST RECEIVER 20Hz-26.5GHz	ESU26	ROHDE AND SCHWARZ	2022-05-27
4612	HORN ANTENNA 1-18GHz	BBHA 9120 D	SCHWARZBECK MESS-ELEKTRONIK	2021-06-14
4656	HORN ANTENNA 18-40GHz	BBHA 9170	SCHWARZBECK	2021-07-19
4729	PRE-AMPLIFIER G>30dB 18-40GHz	BLMA 1840-1M	BONN ELEKTRONIK	2021-02-11
5641	HYBRID BILOG ANTENNA 30MHz-6GHz	3142E	ETS LINDGREN	2021-07-31
6064	SEMIANECHOIC ABSORBER LINED CHAMBER	SAC-3	Frankonia	---
6126	ETHERNET TEMPERATURE AND HUMIDITY LOGGER	HWg-STE	HW GROUP	2021-04-17
6132	ETHERNET TEMPERATURE AND HUMIDITY LOGGER	HWg-STE	HW GROUP	2021-04-20
6195	PRE-AMPLIFIER G>55dB 1-18GHz	AMF-7D-01001800-22-10P	NARDA	2021-05-19
6329	SHIELDED ROOM		FRANKONIA	---

Summary

Emission Test		
Requirement – Test case	Verdict	Remark
Radiated emission. Electromagnetic field measure (30 MHz – 1000 MHz)	P	---
Radiated emission. Electromagnetic field measure (1 GHz – 17 GHz)	P	---
Radiated emission. Electromagnetic field measure (17 GHz – 26 GHz)	P	---
Continuous conducted emission (150 KHz – 30 MHz)	N/A	(1)
<u>Supplementary information and remarks:</u>		
1) The test is not applicable because the equipment is powered in DC.		

Appendix A: Test results

Appendix A content

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DESCRIPTION OF THE OPERATION MODES

The operation modes described in this paragraph constitute a functionality of the sample under test for itself. The operation modes used by the samples to which the present report refers, are shown in the following table:

OPERATION MODE	DESCRIPTION
OM#01	EUT ON. Bluetooth, WiFi 2.4GHz and WiFi 5GHz OFF. USB transferring data (music input). Display showing the playlist. Power supply: 12Vdc.
OM#02	EUT ON. Bluetooth, WiFi 2.4GHz and WiFi 5GHz OFF. FM in reception mode. Display showing the radio station information. Power supply: 12Vdc.

After a preview, it is determined that the work case operation mode is OM#01. The complete results for this mode are included in this report.

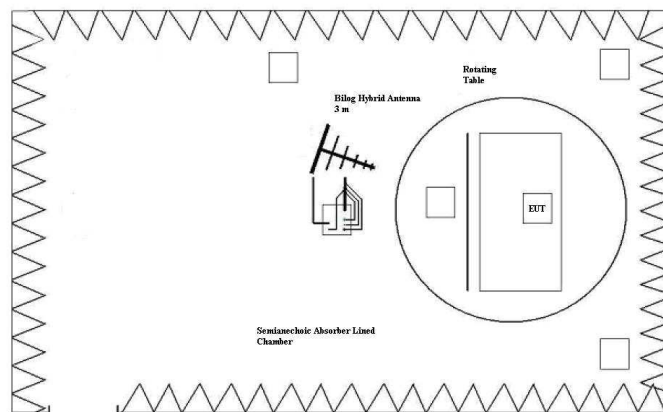
RADIATED EMISSION. ELECTROMAGNETIC FIELD MEASURE

LIMITS:	Product standard:	FCC CFR 47, Part 15, Subpart B (10-1-19 Edition), Secs. 15.109; ICES-003 (January 2016, updated April 2019)
	Test standard:	FCC CFR 47, Part 15, Subpart B (10-1-19 Edition), Secs. 15.109; ICES-003 (January 2016, updated April 2019)

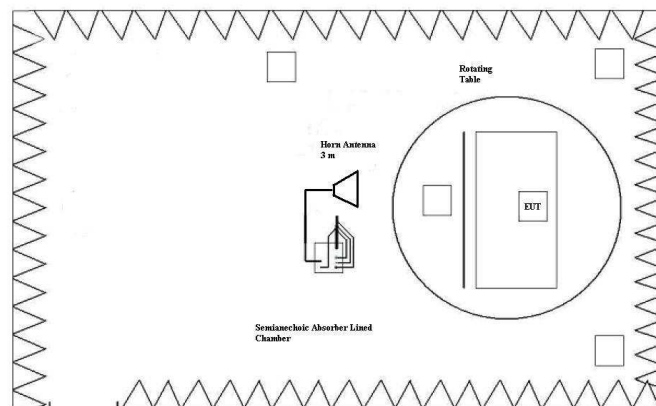
Limits of interference Class B

The applied limit for radiated emissions, 3 m distance, according with the requirements of FCC Rules and Regulations 47 CFR Part 15, Subpart B (10-1-19 Edition), Secs. 15.109 & ICES-003 Issue 6 (Updated 04-2019)

Frequency of emission (MHz)	Field strength (microvolt/meter)
30-88	100
88-216	150
21-960	200
Above 960	500



Setup for measurements < 1GHz.



Setup for measurements > 1GHz.

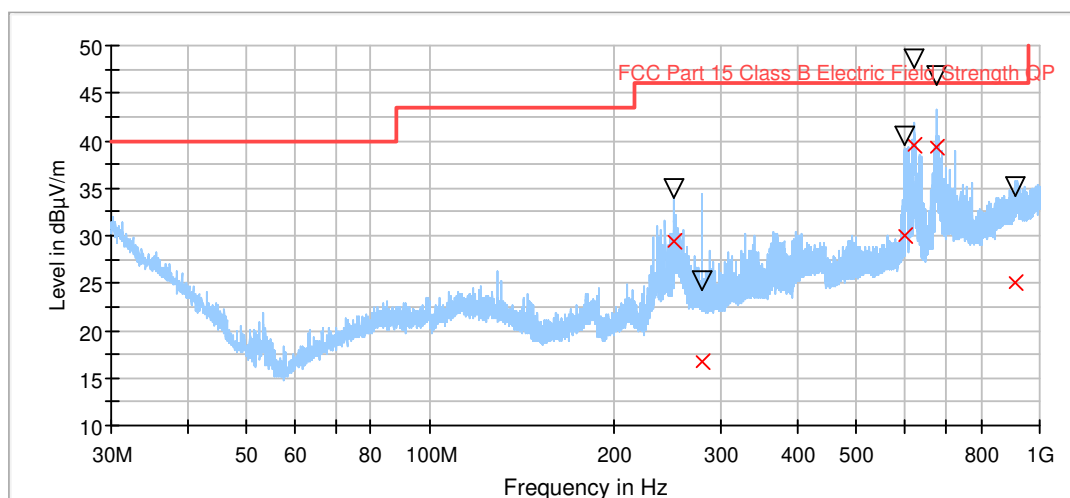
TESTED SAMPLE:	S/01
TESTED OPERATION MODES:	OM#01
TEST RESULTS:	CRmmnnRRPP: CR, Radiated Condition; mm: Sample number; nn: Operation mode; RR: Range; PP: Polarization.

CRmmnnRRPP	Description	Result
CR0101LR	Range: 30 MHz - 1000 MHz.	P
CR0101HR_PH	Range: 1 GHz – 17 GHz. Horizontal polarization.	P
CR0101HR_PV	Range: 1 GHz – 17 GHz. Vertical polarization.	P
CR0101HR2_PH	Range: 17 GHz – 26 GHz. Horizontal polarization.	P
CR0101HR2_PV	Range: 17 GHz – 26 GHz. Vertical polarization.	P

Radiated Emission. CR0101LR

Project: 63185REM.091
 Company: PANASONIC AUTOMOTIVE SYSTEM EUROPE GMBH
 Sample: S/01
 Operation mode: OM#01
 Description: EUT ON. Bluetooth, WiFi 2.4GHz and WiFi 5GHz OFF. USB transferring data (music input). Display showing the playlist. Power supply: 12Vdc..

Full Spectrum



— Peak Preview
X QuasiPeak
— FCC Part 15 Class B Electric Field Strength QP
▽ MaxPeak

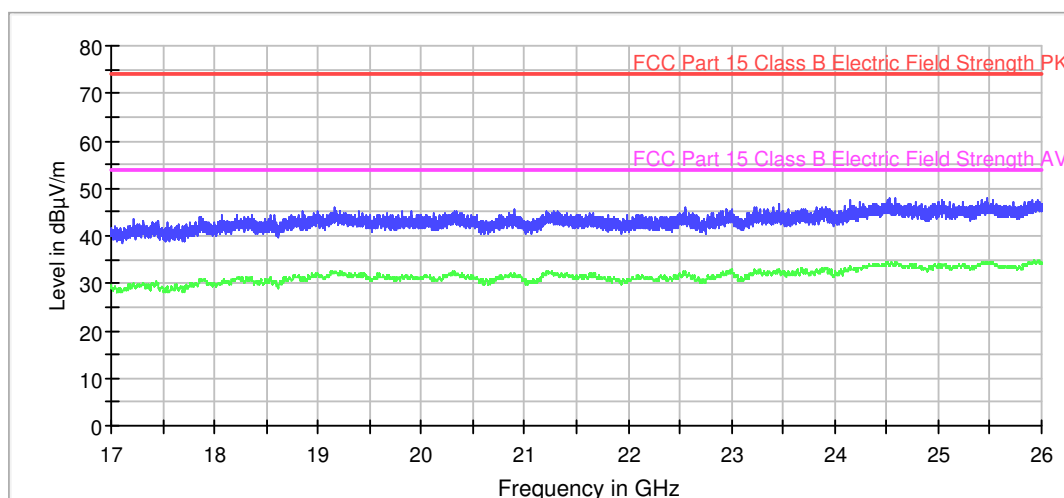
Maximization

Frequency (MHz)	QuasiPeak (dBµV/m)	MaxPeak (dBµV/m)	Limit (dBµV/m)	Margin (dB)	Height (cm)	Pol	Azimuth (deg)	Corr. (dB/m)
251.465000	29.33	34.98	47.00	17.67	118.0	H	24.0	11.6
280.131000	16.73	25.32	47.00	30.27	108.0	V	230.0	12.4
601.595000	30.07	40.50	47.00	16.93	149.0	H	119.0	19.1
624.027000	39.50	48.69	47.00	7.50	133.0	H	258.0	19.3
674.998000	39.37	46.77	47.00	7.63	105.0	V	0.0	20.1
913.427000	25.04	35.14	47.00	21.96	258.0	V	100.0	22.7

Radiated Emission. CR0101HR2_PH

Project: 63185REM.091
 Company: PANASONIC AUTOMOTIVE SYSTEM EUROPE GMBH
 Sample: S/01
 Operation mode: OM#01
 Description: EUT ON. Bluetooth, WiFi 2.4GHz and WiFi 5GHz OFF. USB transferring data (music input). Display showing the playlist. Power supply: 12Vdc. Horizontal Polarization.

RE FCC Part 15 ClassB 17-26GHz



— Average Scan — Peak Scan
— FCC Part 15 Class B Electric Field Strength PK — FCC Part 15 Class B Electric Field Strength AV

Subrange Maxima

Frequency (MHz)	PK+ CLRWR (dBµV/m)	AVG CLRWR (dBµV/m)
17862.800000	42.4	30.8
18770.400000	43.4	31.6
19178.000000	44.1	32.6
20308.400000	43.6	32.5
21219.600000	44.4	32.5
21634.000000	44.8	32.0
23228.000000	44.7	32.8
24142.400000	45.1	33.5
24504.800000	45.7	34.5
25974.000000	46.6	34.8

